Hand Hygiene not only the Motions but the Moments

Shahrzad E. Darvish, MSN, RN, CIC, Jean-Sebastien Rachoin, MD , Dennis Meredith, DVM, CIC, Denise Polat, MD, CIC,
Jessica McKnight, MPH, CIC , Jes Smith, MHA, RN , Tracey Hamilton, BSHA,CFER, CRCST , Raquel Nahra, MD

Cooper University Healthcare

Cooper University Healthcare-
Department of
Infection Prevention and Control

Introduction

Hand hygiene (HH) is a paradigm of infection prevention. Often, emphasis has been placed on appropriate motions of hand hygiene. The implementation of the 5 moments of HH in clinical practice was previously hindered in our institution by the perceived enormous lift of educating healthcare providers. Hand hygiene is a basic, but essential standard of infection prevention and control. The World Health Organization's (WHO) My 5 Moments for Hand Hygiene more clearly defines opportunities in which HH should be performed to reduce transmission of harmful microorganisms in the healthcare setting. According to the WHO, this particular model is "evidence based, field tested, and has a user centered approach" that is "designed to be easy to learn, logical and applicable in a wide range of settings" (WHO, 2019). The 5 Moments are comprised of performing HH before touching a patient, before clean/aseptic procedures, after body fluid exposure/risk, after touching a patient, and after touching patient surroundings (WHO, 2019).

Objectives

1- Assess compliance with the WHO 5 Moments of HH among healthcare workers before and after an educational campaign and its effect on CLABSI, CAUTI, *Clostridium difficile* infection (CDI), MRSA Lab ID and MDR Acinetobacter (MDR Acb).

2- Describe the strategies in educating healthcare staff on the 5 Moments of HH to improve hand hygiene compliance and examine its impact on decreasing health care-associated infections.

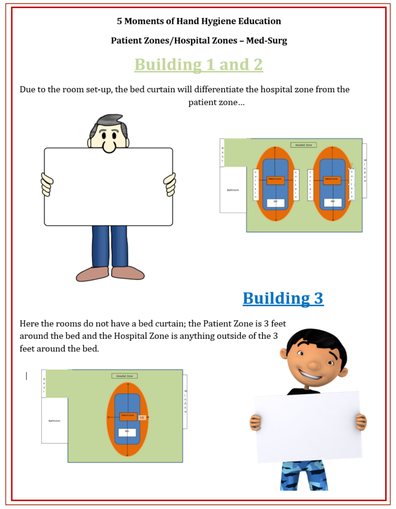
Methods

A retrospective evaluation of the implementation of the WHO 5 Moments of HH was compared with CLABSI, CAUTI, MDR Acinetobacter, MRSA LabID and CDI rates. Education on the WHO HH concepts occurred between October and December 2018. Compliance data was collected from January to December 2019. Baseline 5 Moments of HH data was obtained for three weeks prior to education, as this concept was newly introduced.

Education on the 5 Moments of HH was provided through direct observation with immediate feedback for missed moments, traditional lecturing, and mandatory computer-based education to all employees. Additionally, reminder posters and graphics were placed in strategic locations through the institution.

Methods

Infection Prevention (IP) collaborated with unit leadership and staff to determine specific patient and hospital zones. Individualizing patient and hospital zones for different unit layout facilitated education of staff. Furthermore, education on the different moments was individualized for each discipline in accordance to its interactions with patients. HH observers followed a standardized data collection template, talking points to staff and received 1:1 training from IPs. The observers varied among staff in IP, quality, patient safety and unit-based champions. Hand gel bottles and new alcohol based hand gel dispensers were placed in strategic locations to optimize its use at the appropriate moments. Statistical analyses using control charts with testing for special cause variations included all data points before and after education of the 5 Moments of HH. We used Pearson correlation to assess relation between HAI and HH.



How do we distinguish the "Patient Zone" from "Accessing Patient Devices" and the "Hospital zone"?

Patient Zone		Hospital zone
Patient	**Accessing Patient Devices**	
• Bed (Side Rails, Headboard and Footboard) • IV Pump and Channels • Cardiac Monitor • Arterial line/Poles • Ventilator • CVVHD • TTM Devices • Zoll/Impella/Balloon Pump	• Central Lines/PICC/ IV access • Foley • Tracheostomy • PEG • All drains (chest, nephrostomy, JP drains) • All ostomies • Wound VAC • EVD/Bolt • Rectal bags/Zassi • Aseptic/clean task • Any other device that is internally introduced to the patient	• Counters/Curtains/ Couches • Patient Bathroom Area • Any Computer (WOW) outside of patient zone/room • Any surface outside of the Patient Zone • Bedside table • Door Knob • Curtain • Nurse's Station • Other patient's zone
Moment 1 upon entering patient zone	**Moment 2 or 3** upon accessing patient devices	**Moment 4 or 5** upon leaving patient and healthcare zone

*It is essential that when moving between the Patient Zone and Hospital Zone or while Accessing Patient Devices as defined above, hand hygiene MUST be performed in between each encounter.

Results

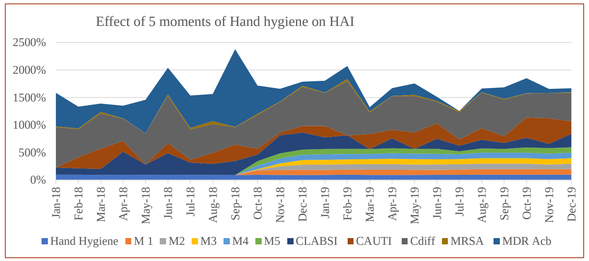
Over the 12 months period post intervention, HH compliance increased due to educational campaigns. The number of observations per moment per month ranged between 96 and 351 observations, and most observation opportunities occurred during moments 1 (M1) and 5 (M5).

M1 significantly correlated positively with moment 2 (M2) (P=0.001), moment 3 (M3) ($p < 0.001$), moment 4 (M4) (p =0,001), but not with moment 5 (M5).

M2 correlated positively with M3 ($p < 0.001$), M4 ($p< 0.001$), but not withM5. M3 correlated positively with M4 ($p< 0.001$), but not with M5

There were no correlations between CLABSI, CAUTI, CDI, or MRSA and with M1-M5 of Hand Hygiene.

There is a correlation between the decrease in the incidence and point prevalence of MDR Acinetobacter and compliance with M1 (p 0.04), M2 ($p < 0.001$), M3 (p 0.002), and M4 (p 0.028).



Conclusion

The success of the described multidisciplinary approach, in educating 5 moments of HH, was defined by the increased adherence to HH over time. The poor compliance with M5 is thought to be due to the perception that M4 and M5 can often be the same with staff member finishing a task and exiting the patient room.

Though not one moment was associated with a decrease in HAI, a statistically significant reduction in MDR Acb transmission was noted as compliance with the 5 moments of HH increased.

References

World Health Organization (WHO), 2019. My Five Moments of Hand Hygiene. Retrieved from https://www.who.int/infection-prevention/campaigns/clean-hands/5moments/en/

Acknowledgements: Department of Regulatory and Patient Safety: Danielle Sharkey, MSN RN APRN, Donna O'Shea, MSN RN-BC, and Jessica Haines, MBA; **Department of Quality Improvement:** Debbie Buck, RN, Laura Bolt, RN, Pam Crabtree, RN, Sue Gould, RN, Bob Marburger, RN, Angela Murphy, RN, Casey Dalsey, RN, Janet Tridente, RN, Martha Stefaniak, MPH, Linda Hartsough; **Department of Nursing Education; Department of Nursing: All Nursing Clinical Directors and Assistant Clinical Directors**

RESEARCHPOSTERPRESENTATIONDESIGN © 2015
www.PosterPresentations.com